

EDUCATION

- 2010 **MS, Civil and Environmental Engineering**
San Jose State University, San Jose, California
- 2005 **BA, Computational And Applied Mathematics**
Rice University, Houston, Texas

EXPERIENCE

- November 2023
to Present **Engineering Design & Testing Corp.**
Concord, California
- Consulting Engineer*
Forensic civil engineering investigation into root cause, scope, and value of damage to structures and facilities. Case experience includes construction defects, impacts from trees, vehicles, utility poles, and other objects, roofing damage, roof truss assessment, creek flooding, sewer backups, water intrusion into basements and other subsurface structures, and damage to wastewater treatment processes.
- July 2016
to November 2023 **San Francisco Public Utilities Commission Wastewater Enterprise**
San Francisco, California
- Engineer*
Developed Combined Sewer Outfall (CSO) annual inspection program to comply with NPDES permit. Planned sewer inspections including timing for tidal exposure and diurnal flow, lockout-tagout and traffic control. Wrote tactical asset management Plan for CSO structures and standard operating procedures for equipment installation and maintenance. Owner representative for CSO capital improvement projects and emergency repairs. Confined space entry inspections of large-diameter sewers, transport-storage boxes, and CSO structures. Coordinated and evaluated pilot tests of drone technology for sewer condition assessment. Field engineering oversight of CSO level monitoring device installation and maintenance. Field engineering oversight of sewer structure surveys and 3D scans.
- December 2011
to July 2016 **San Francisco Public Works Hydraulic Engineering**
San Francisco, California
- Engineer*
Modeling studies for combined sewer pipe sizing, combined sewer lining and backflow prevention projects, and green infrastructure rain garden sizing. Model calibration based on flow monitoring data. Field engineering oversight of level and flow monitoring device installation and maintenance. Programmed flow calculations based on flow monitoring data. Developed CSO volume and duration calculator. Surveyed surface elevations using totals station, sight level, and GNSS probes; calculated subsurface elevations from surface surveys and field measurements.

March 2011
to August 2011

City of San Jose Watershed Enforcement
San Jose, California

Environmental Inspector

Inspected businesses and industrial facilities for urban runoff control and stormwater protection compliance; provided outreach and education on stormwater protection and hazardous waste disposal.

November 2010
to December 2010

Montara Water and Sanitary District
Montara, California

Temporary Maintenance Worker

Daily rounds of water wells and treatment plant, meter reading, service turn-offs, USA underground pipe location, and other field tasks for small water treatment and distribution system. Position was temporary to replace injured permanent staff.

June 2009
to November 2010

San Jose – Santa Clara Water Pollution Control Plant
San Jose, California

Process Engineering Intern

Edited piping and instrumentation diagrams and wrote control strategies for wastewater treatment processes. Analyzed equipment failure modes to identify monitoring and automation needs. Recommended instrumentation and soft sensors to detect equipment failure. Prepared cost estimates. Collected samples, took field measurements, and analyzed data for studies including clarifier stress and dynamic tests, air repartition, hydraulic short-circuiting, and online sensor verification. Conducted jar flocculation, settling, and coagulation tests. Provided specifications to and obtained price quotes from vendors. Coordinated pilot trial of ultrasonic sludge thickness sensors in dissolved air floatation tank.

November 2005
to May 2007

Alameda County Water District
Fremont, California

Groundwater Engineering Intern

Regulatory oversight of soil and groundwater contamination cases. Reviewed work plans and reports. Evaluated cases for closure. Communicated with environmental consultants, property owners, and local and state government to ensure accurate site history reporting and proper site remediation and waste disposal. Observed field activities. Prepared grids and data files for, calibrated, and ran finite-volume and finite-element groundwater flow and contaminant transport models. Operated, cleaned, and helped install and maintain a pilot ultra-filtration system. Collected and analyzed data for pilot study. Collected and field-tested stream samples for NPDES compliance. Collected residential water samples.

June 2004
to August 2004

Skyline College
San Bruno, California

Air Quality Testing Volunteer

Collected, incubated and analyzed airborne microorganism samples for an investigation of indoor air contamination.

REGISTRATIONS and CERTIFICATIONS

- Registered Professional Engineer in:
 - Arizona (#80878)
 - California (#100784)
 - Colorado (#0064179)
 - Nevada (#032419)
 - New Mexico (#29980)
 - Oregon (#104711PE)
 - Utah (#13828615-2202)

- National Council of Examiners for Engineers and Surveying Record (#12-808-97)

- NASSCO Pipeline Assessment Certification Program (#P0038444-072022)